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# (12) UK Patent Application (19) GB (11) 2 312 627 (13) A

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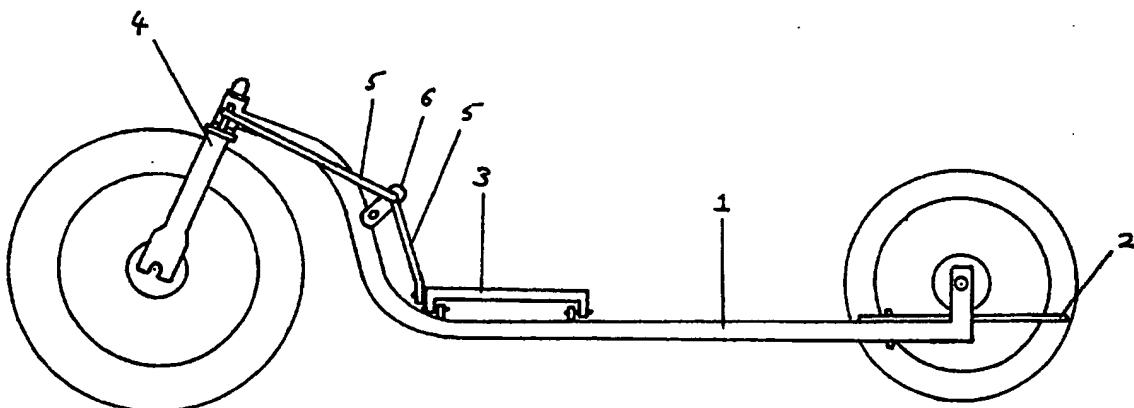
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GB 2291596 A

(58) Field of Search  
UK CL (Edition O ) A6D D32A D32B  
INT CL<sup>6</sup> A63C 17/00 17/04

(54) Wheeled land surfing vehicle

(57) The vehicle comprises a rigid frame 1, two rear wheels 2 and a steerable front wheel mounted in forks 4, the steering motion being generated and transmitted to the forks by a tilting foot-plate 3 and rigid bars 5 and levers 6.

Fig 2



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Fig 1

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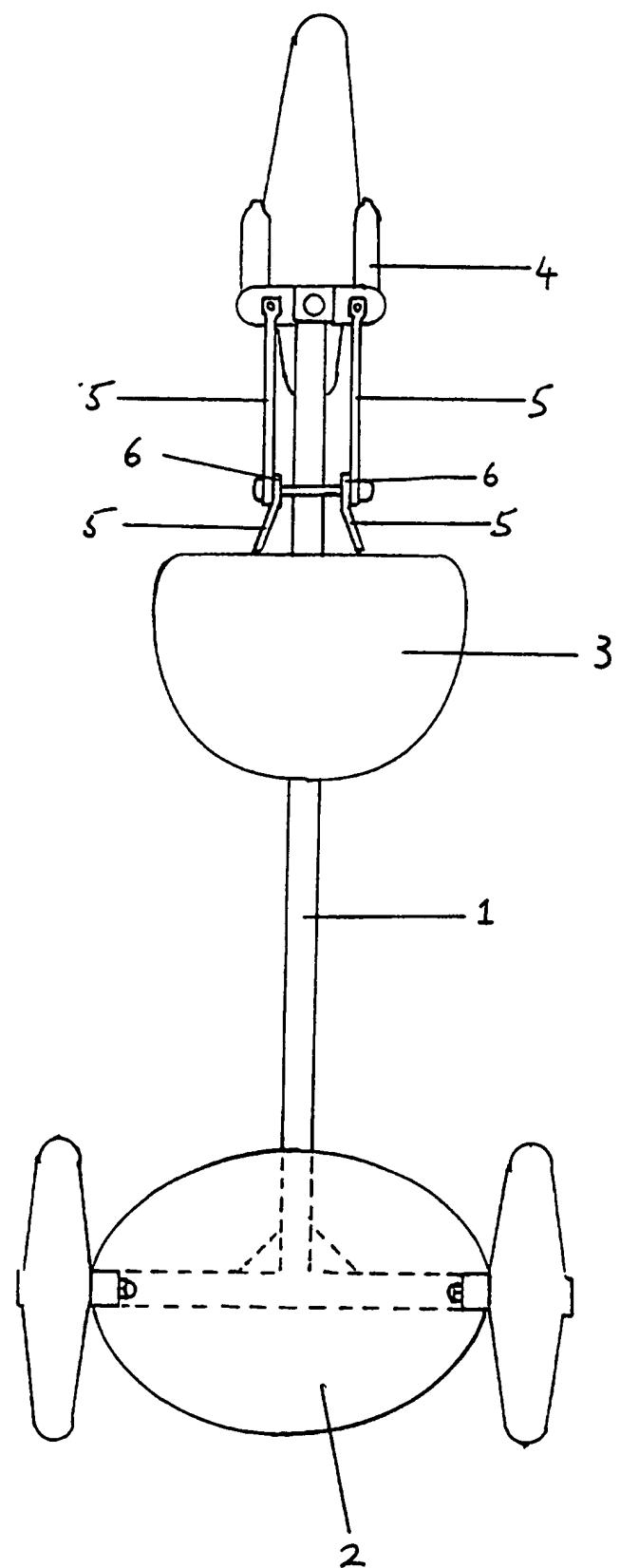
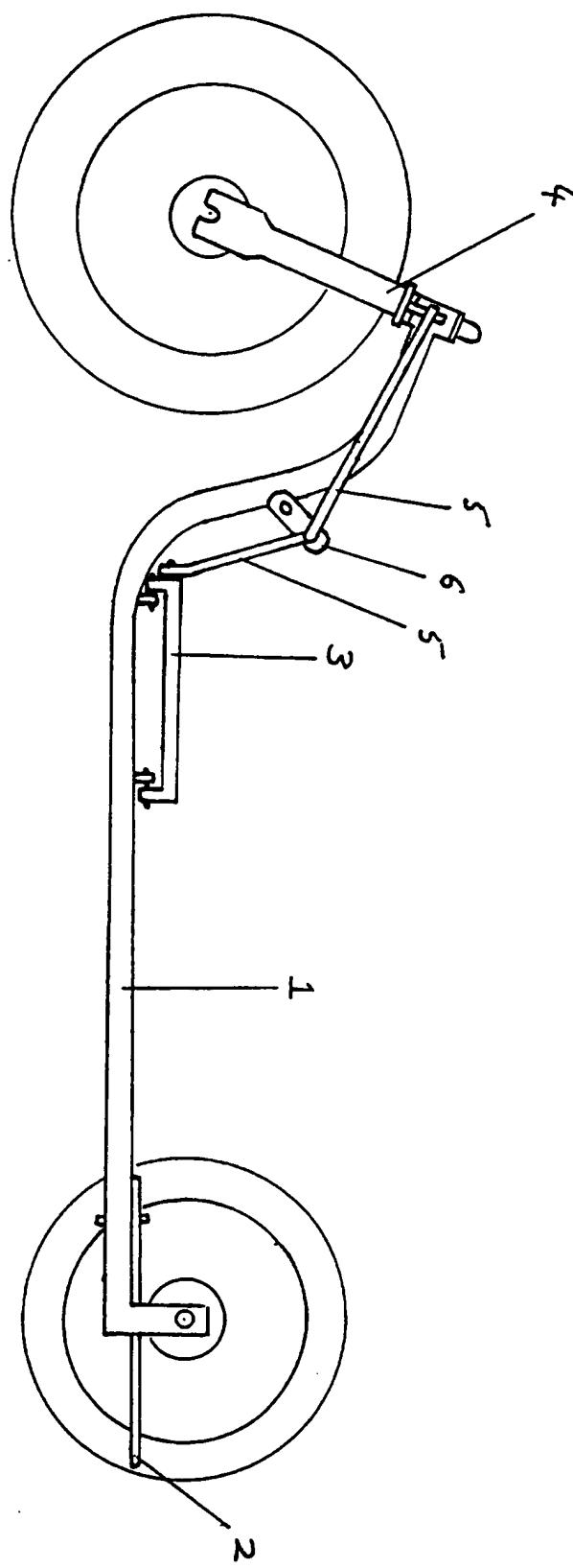


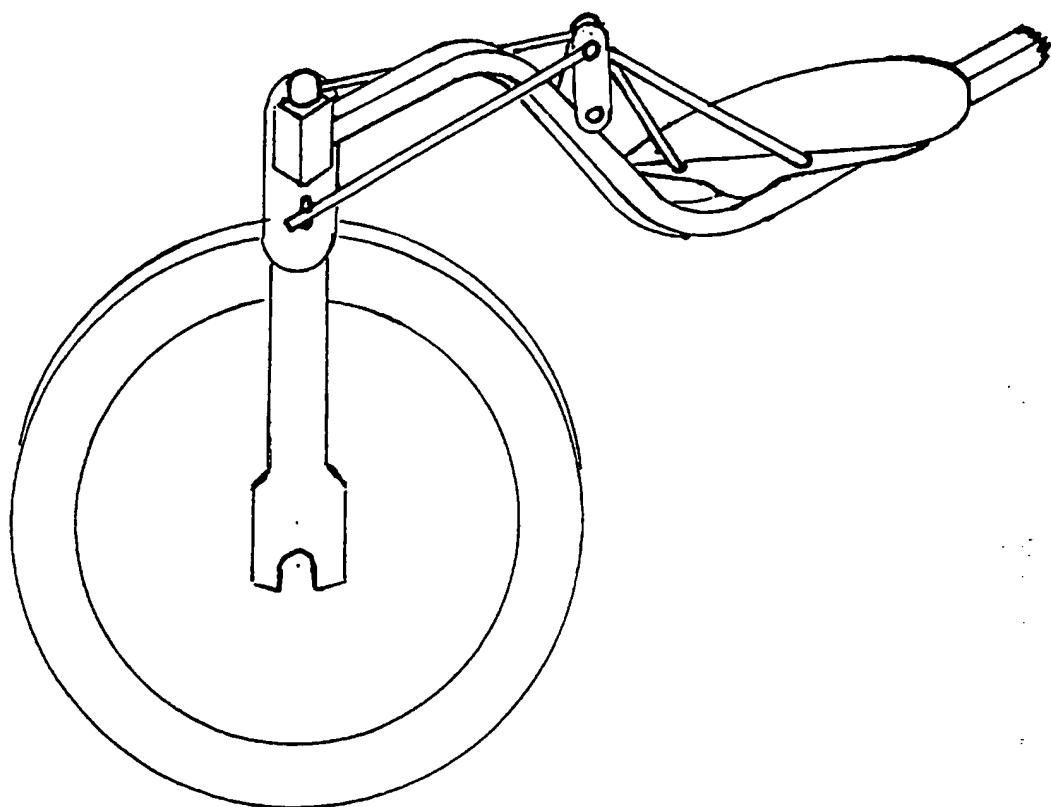
Fig 2

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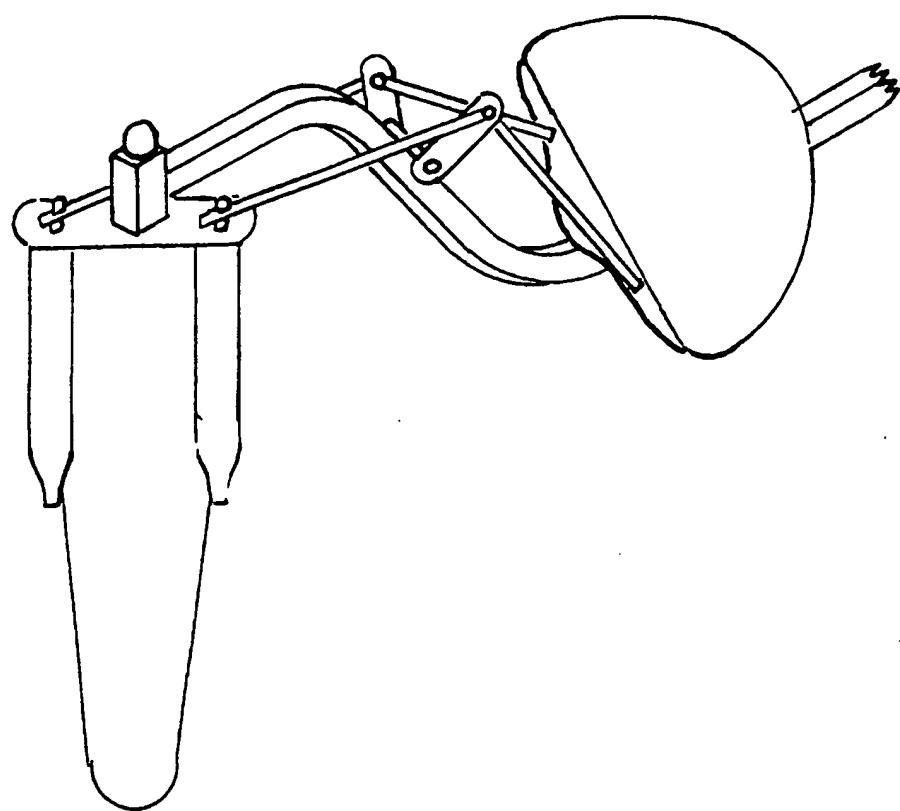
**Fig 3**

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**Fig 4**

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**WHEELED LAND SURFING VEHICLE**

This invention relates to a wheeled vehicle designed to simulate 'surfing' or 'snow-boarding' when used on sloping ground.

Wheeled vehicles such as Skateboards have been known in the past which allow the user to travel over sloping ground in a 'side-ways-on' stance similar to persons using a surf or snow board.

Such devices are steered by the rider tilting the whole board, which, in the case of skateboards, turns the axis of the wheels, through a special joint, relative to the longitudinal axis of the board.

Skateboards tend to have small wheels which means they cannot travel easily over rough terrain such as grass, and turning tight circles can be difficult. They are also usually quite short in comparison with surf or snow boards, which, coupled with the small wheels, leads to lesser control, the greater the speed of travel; limiting the dynamic balance similarity to surfing or snow-boarding.

According to the present invention there is provided a wheeled vehicle comprising a steel frame with two wheels separated by a foot-plate rigidly secured to the frame at one end and a single wheel attached to a pair of forks rotatably secured to the other, a tilting foot-plate for steerage mounted on the steel frame adjacent to the single wheel and a mechanical linkage connecting the tilting foot-plate to the rotatably secured forks whereby the tilt of the said foot-plate from the horizontal plane results in the rotation of said forks and single wheel in the vertical plane allowing the vehicle to be steered.

Preferably the steel frame should be no shorter than 800 cm.

Preferably the rigid foot plate should span no less than 400 mm between the said pair of wheels, which should be no less than 300 mm diameter respectively.

Preferably the single wheel secured in the forks should be no less than 350 mm in diameter.

Preferably both rigid and tilting foot plates should have a non-slip surface and be fitted with adjustable foot straps or bindings.

Preferably the mechanical linkage should be in the form of rigid steel bars connected to said forks and tilting foot-plate via a pivoting lever mounted on the steel frame.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:-

Figure 1 shows a plan of the vehicle.

Figure 2 shows a side elevation of the vehicle.

Figure 3 shows in perspective the mechanical steering linkage turning to the right.

Figure 4 shows in perspective the mechanical steering linkage turning to the left.

Referring to the drawings, (figures 1 &2) the wheeled land/surfing vehicle comprises a frame (1) to which is rigidly -secured a footplate (2), a tilting footplate (3) and on rotatably secured pair of forks (4). The tilting footplate (3) is connected to the rotatable forks (4) by a mechanical linkage which comprises steering rods (5) and pivoting levers (6).

The vehicle is steered by a mechanical linkage (5&6) between the footplate (3) and the forks (4), the linkage consists of four rigid steel bars (5) and two levers rotatably attached at one end (6) to the main frame (1) between the footplate (3) and the forks (4), the footplate (3) which is flexibly attached to the main frame is attached to the levers (6) with two of the rods (5) which are attached using flexible linkages on either side of the front of the footplate (3) to the ends of the levers (6) again using flexible linkages. The levers are in turn connected to the forks (4) with the other two rods which are each flexibly linked at one end to a lever and the other to one side of the fork assembly, figure 3 illustrates the mechanical linkage when a right hand turn is being carried out and figure 4 illustrates the mechanical linkage when a left hand turn is being carried out.

## CLAIMS

1. A wheeled vehicle with a rigid frame having two wheels at one end which are separated by a foot platform secured to the frame; at the other end of the frame, forks in which a single wheel is mounted are rotatably attached; adjacent to this single wheel a second foot platform is mounted to the frame in a way which allows it to tilt about an axis which is longitudinal to the wheeled vehicle; a mechanical steering linkage connects this tilting foot platform to the rotatably attached forks, thus the tilting action of the foot platform causes a rotating effect on the rotatably attached forks allowing the vehicle to be steered from the foot platform; the mechanical steering linkage consists of rigid bars connected to a pivoting lever mounted on the rigid frame between the tilting foot platform and the rotatably attached forks; the mechanical steering linkage can be mounted singularly to one side of the rigid frame or to both sides of the rigid frame as an identical pair.
2. A wheeled vehicle as claimed in Claim 1 including foot platforms which have a non-slip surface and adjustable foot straps or bindings secured to each foot platform.
3. A wheeled vehicle as claimed in any preceding claim which is made from metal, plastics material or wood or from a combination of these materials.
4. A wheeled vehicle substantially as herein described and illustrated in the accompanying drawings.



Application No: GB 9609101.2  
Claims searched: 1 to 4

Examiner: Alan Blunt  
Date of search: 18 July 1997

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): A6D (D32A, D32B)

Int Cl (Ed.6): A63C 17/00, 17/04

Other:

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	GB2291596A (HICKMAN) - whole document	1 to 4

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
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